



**Air Pollution Control  
Title V Permit to Operate  
Statement of Basis for Permit No V-SUIT-0054-2015.00  
{Date}**

**Samson Resources Company  
Spring Creek Compressor Station  
Southern Ute Indian Reservation  
La Plata County, Colorado**

**1. Facility Information**

a. Location

The Spring Creek Compressor Station (Spring Creek), owned and operated by Samson Resources Company (Samson), is located within the exterior boundary of the Southern Ute Indian Reservation. The exact location is Section 23, T33N, R7W, in La Plata County, at latitude North 37.092389 and longitude West 107.576028. The Mailing address is:

Samson Resources Company  
Spring Creek Compressor Station  
370 17<sup>th</sup> Street; Suite 3000  
Denver, CO 80202

b. Contacts

**Facility Contact:**

Brad Rogers  
Senior Environmental Specialist  
Samson Resources Company  
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720-239-4406

**Responsible Official:**

Julia Gwaltney  
Vice President, Western Division  
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c. Description of Operations

According to Samson, the Spring Creek Compressor Station receives coal-bed methane gas gathered from nearby sources and compresses the natural gas to transmission pipeline specifications. Gas entering the facility from the field is first fed to an inlet separator that gravimetrically removes water that may have condensed during the transportation from the supplying gas wells. Separator overhead gas is fed to one of up to ten compressor engines from a common suction header. The compressors discharge gas to a

common discharge header that feeds to scrubbers. The scrubbers separate and collect liquids that may have formed during compression. The compressed gas is then fed to a dehydration unit. Tri-ethylene glycol is circulated counter-currently and absorbs water in the wet gas. Rich glycol is circulated to a reboiler, where moisture is driven to the atmosphere by heating the glycol. Dry gas exits the contactors and is directed to the sales line, where it is metered and exits the facility. The gas processing capacity of the facility is approximately 60 MMscf/day with ten compressor engines operating.

There are currently nine, with future expansion to ten, natural gas-fired 4-stroke lean burn 1340 horsepower Caterpillar G3516LE compressor engines operating at the facility. These units have a site rating of 1092 horsepower. The facility also contains one Triethylene-glycol (TEG) dehydration unit with two 30 MMscfd contact towers and one 0.75 MMBtu/hr reboiler burner. Additional facility equipment includes: five 1000 bbl produced water tanks, one 750 bbl produced water tank, seven 500 gallon lube oil tanks, one 500 bbl slop tank, and two 500 gallon ethylene glycol tanks.

Each of the Caterpillar G3516LE compressor engines is equipped with either a NOx sensor or O<sub>2</sub> sensor as part of the air fuel ratio controller system (AFRC) and an oxidation catalytic converter to reduce emissions in the exhaust stream. A continuous parameter monitoring system (CPMS) is used to record the catalyst inlet temperature of each engine to ensure that the inlet temperature remains between 450 °F and 1350 °F. The CPMS continuously monitors the catalyst inlet temperature and reduces the data to a 4-hour rolling average. The CPMS also logs the shutdown times and events and displays the unit process and fuel flows for each engine. The pressure drop across the catalyst is manually recorded at least once a month. Facility data is recorded in accordance with applicable parts of Section §63.6640.

d. List of All Units and Emission-Generating Activities

Samson provided the information contained in Tables 1 and 2 in its initial part 70 permit application. Table 1 lists emission units and emission generating activities, including any air pollution control devices. Emission units identified as “insignificant” emitting units (IEUs) are listed separately in Table 2.

**Table 1 – Emission Units**  
**Samson Resources Company, Spring Creek Compressor Station**

Emission Unit ID	Description	Control Equipment
	9 – Caterpillar G3516LE (4SLB) Natural Gas-Fired Compressor Engine, 1,340 nameplate rated HP	
E1	Serial No.: WPW1905	Oxidation Catalyst
E2	Serial No.: WPW1778	
E3	Serial No.: WPW02104	
E4	Serial No.: WPW00797	
E5	Serial No.: WPW00938	
E6	Serial No.: WPW00174	
E7	Serial No.: WPW00177	
E8	Serial No.: WPW00178	

E9	Serial No.: WPW00724      Installed: 02/23/2010	
D1	1– PESCO TEG Dehydration Unit, 60 MMscf/day, Serial No.: NA      Installed: NA	None

The Southern Ute Indian Tribe/State of Colorado Environmental Commission’s Reservation Air Code allows sources to separately list in the permit application units or activities that qualify as “insignificant” based on potential emissions below 2 tpy for all regulated pollutants that are not listed as hazardous air pollutants (HAPs) under Section 112(b) of the Clean Air Act (CAA) and below 1,000 lbs per year or the de minimis level established under Section 112(g), whichever is lower, for HAP emissions [RAC 2-106(4)(f); RAC 1-103(36) and (37)]. However, the application may not omit information needed to determine the applicability of, or to impose, any applicable requirement, or to calculate the fee [RAC 2-106(4)(f)]. Units that qualify as “insignificant” for the purposes of the Part 70 application are in no way exempt from applicable requirements or any requirements of the Part 70 permit.

Samson stated in its Part 70 initial permit application that the emission units in Table 2, below, are insignificant. The application provided calculations for heater/reboiler emissions based on EPA’s AP-42 emission factors. Samson provided sufficient information, including EPA Tanks 4.0.9d calculations, to verify any emissions from liquids in the tanks were insignificant. This data supports Samson’s claim that these units qualify as insignificant.

**Table 2 – Insignificant Emission Units  
Samson Resources Company, Spring Creek Compressor Station**

Emission Unit ID	Description	Size/Rating
IEU1	10   -   Lubricating Oil Storage Tank	500 gal
IEU2	10   -   Skid Drain Tank	500 gal
IEU3	2   -   Ethylene Glycol Storage Tank	500 gal
IEU4	10   -   Waste Oil/Slop Tank	500 gal
IEU5	1   -   Produced Water Storage Tank	750 bbl
IEU6	5   -   Produced Water Storage Tank	1000 bbl
IEU7	1   -   Slop Oil Tank	500 bbl
IEU8	10   -   Compressor Blowdown Emissions	N/A
IEU9	10   -   Compressor Starter Emissions	N/A
IEU10	10   -   Compressor Cylinder Rod Packing Vent Emissions	N/A
FUG	-   Fugitives	Estimated 786 components

e. Facility Construction and/or Permitting History

The Spring Creek Compressor Station became a major CAA Title V Source, as defined in 40 CFR 70.2, on February 25, 2010 when the sixth compressor engine began operation. A Part 71 Federal Operating Permit Application was received by the U.S. Environmental Protection Agency (EPA) on December 23, 2010. An amendment to the application was received by the EPA on January 12, 2012. A Tribal Operating Permit Application was submitted for the facility in March of 2013.

On May 1, 2014 Samson and EPA entered into Consent Agreement Final Order (CAFO) #CAA-08-2013-0015. The emission limits in the CAFO provided enforceable recognition of the air-to-fuel ratio (AFR) control systems installed on each of the nine (9) engines currently operating at the facility. Although Spring Creek remains a major source subject to Title V, the enforceable emission limits in the CAFO reduce the emissions NO<sub>x</sub> emissions at the facility to synthetic minor levels with respect to the Prevention of Significant Deterioration (PSD) permit program at 40 CFR Part 52.

On March 11, 2015, EPA issued Samson synthetic minor new source review permit # SMNSR-SU-000053-2013.001 to maintain, beyond the expiration date of the CAFO, Spring Creek's status as a synthetic minor source of NO<sub>x</sub> emissions with respect to the Prevention of Significant Deterioration (PSD) permit program.

f. Potential to Emit

Under RAC 1-103(51), potential to emit (PTE) is defined as the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation, or the effect it would have on emissions, is federally enforceable.

The PTE for Spring Creek Compressor Station was listed by Samson in Forms "GIS", "PTE", and the various forms "EMISS" of the Part 70 operating permit initial application. Table 3 shows PTE data broken down by each individual emission unit, as well as the total facility-wide PTE.

**Table 3 - Potential to Emit**  
**Samson Resources Company, Spring Creek Compressor Station**

<b>Emission Unit ID</b>	<b>Regulated Air Pollutants<sup>1,2,3</sup></b> <b>in tpy</b>								
	<b>NO<sub>x</sub></b>	<b>VOC</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>CO</b>	<b>Lead</b>	<b>Total HAPs</b>	<b>Largest Single HAP (CH<sub>2</sub>O)</b>	<b>GHGS (CO<sub>2</sub>e mtpy)</b>
E1	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E2	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E3	24.8	10.5	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E4	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E5	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E6	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E7	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E8	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
E9	24.8	3.7	0.0	0.0	19.6	0.0	3.6	2.9	5,423
D1	0.3	13.1	0.0	0.0	0.3	0.0	9.9	0.0	773.3
Fugitives	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	399.1
Total IEUs	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total</b>	<b>223.5</b>	<b>56.8</b>	<b>0.0</b>	<b>0.0</b>	<b>176.6</b>	<b>0.0</b>	<b>42.3</b>	<b>26.1</b>	<b>49,979.4</b>

<sup>1</sup> Controlled NO<sub>x</sub> engine emissions are based on the 2.3 g/hp-hr and 24.8 ton 12-month rolling average emission limitation established in TMSNR permit #SMNSR-SU-000053-2013.001. Uncontrolled CO, VOC and CH<sub>2</sub>O engine emissions are based on manufacturer specifications. Total uncontrolled HAP engine emissions were calculated by using AP-42 emission factors for 4SLB engines and the manufacture specified uncontrolled CH<sub>2</sub>O emission factor.

<sup>2</sup> Uncontrolled dehydrator emissions based on GRI-GLY-Calc modeled emissions.

<sup>3</sup> Heater/reboiler emissions were calculated using AP-42 emission factors

## 2. Tribal Authority

Spring Creek Compressor Station is located within the exterior boundaries of the Southern Ute Indian Reservation and is thus within Indian Country as defined at 18 U.S.C. §1151. On March 2, 2012, the EPA determined that the Southern Ute Indian Tribe of the Southern Ute Indian Reservation had met the requirements of 40 CFR §70.4(b) for full approval to administer its Clean Air Act Title V, Part 70 Permitting Program (Program). In concert with that Program approval, the EPA also found that the Tribe met the requirements of Section 301(d)(2) of the CAA and 40 CFR §49.6 for treatment “in the same manner as a state” for the purposes of issuing CAA Title V, Part 70 operating permits. The EPA promulgated its approval of the Tribe’s applications on March 15, 2012 (77 FR 15267). The requirements of the Clean Air Act Title V, Part 70 Permitting Program (Program) have been incorporated at Article II, Part 1 of the Reservation Air Code. Therefore, the Southern Ute Indian Tribe is the appropriate governmental entity to issue the Title V permit to this facility.

The Reservation Air Code: The Reservation Air Code was adopted pursuant to the authority vested in the Southern Ute Indian Tribe/State of Colorado Environmental Commission by (1) the Intergovernmental

Agreement Between the Southern Ute Indian Tribe and the State of Colorado Concerning Air Quality Control on the Southern Ute Indian Reservation dated December 13, 1999, (2) tribal law (Resolution of the Council of the Southern Ute Indian Tribe No. 00-09), (3) State law (C.R.S. § 24- 62-101), and (4) as recognized in federal law (Act of October 18, 2004, Pub. L. No. 108-336, 118 Stat.1354).

NSPS and NESHAP Delegation: On September 6, 2013, the Southern Ute Indian Tribe received delegation from the EPA to incorporate by reference into the Reservation Air Code and enforce certain subparts of the new source performance standards (NSPS) and national emission standards for hazardous air pollutants (NESHAP) under Sections 111 and 112 of the Clean Air Act, respectively (78 FR 40635). These NSPS and NESHAP subparts generally apply to oil and gas operations within the exterior boundaries of the Southern Ute Indian Reservation and were adopted, unchanged, into the Reservation Air Code as Parts 2 and 3.

Southern Ute Indian Tribe Minor Source Program: The Southern Ute Indian Tribe/State of Colorado Environmental Commission is currently developing a Minor Source Program in order to fill a regulatory gap wherein sources of air pollution located on the Reservation have been subject to fewer requirements than similar sources located on land under the jurisdiction of a state air pollution control agency. Until such time that EPA approves the Minor Source Program as part of a TIP under the Tribal Authority Rule, affected sources must comply with the federal rule “Review of New Sources and Modifications in Indian Country” that was published on July 1, 2011 (76 FR 38748). Starting August 30, 2011 all existing minor sources and minor modifications at existing sources became subject to the Tribal Minor New Source Review rule. Existing true minor sources were required to register with the permitting authority no later than March 1, 2013. After March 2, 2016 all true minor sources in the oil and natural gas sector that intend to construct or modify will have to apply for a preconstruction permit.

### **3. Applicable Requirements**

The following discussion addresses a selection of the regulations from the Code of Federal Regulations (CFR) at Title 40. Note that this discussion does not include the full spectrum of potentially applicable regulations and is not intended to represent official applicability determinations. These discussions are based on the information provided by Samson in its Part 70 initial permit application and are only intended to present the information certified to be true and accurate by the Responsible Official of this facility.

#### **Prevention of Significant Deterioration (PSD) - 40 CFR 52.21**

PSD is a preconstruction review requirement of the CAA that applies to proposed projects that are sufficiently large (in terms of emissions) to be a “major” stationary source or “major” modification of an existing stationary source. A new stationary source, or a modification to an existing minor stationary source, is major if the proposed project has the potential to emit any pollutant regulated under the CAA in amounts equal to or exceeding specified major source thresholds, which are 100 tpy for 28 listed industrial source categories and 250 tpy for all other sources. PSD also applies to modifications at existing major sources that cause a “significant net emissions increase” at that source. Significance

levels for each pollutant are defined in the PSD regulations at 40 CFR 52.21. A modification is a physical change or change in the method of operation.

Spring Creek is not a PSD named source. Therefore, the PTE threshold for determining PSD applicability for this source is 250 tpy for criteria pollutants. On March 11, 2015, EPA issued Samson synthetic minor new source review permit # SMNSR-SU-000053-2013.001 to create legally and practically enforceable reductions of NO<sub>x</sub> emissions to establish Spring Creek as a synthetic minor source of NO<sub>x</sub> emissions with respect to PSD. Thus, Spring Creek is currently a synthetic minor source of NO<sub>x</sub> and below the PSD thresholds for all other criteria pollutants. **Therefore, the requirements of PSD do not apply to Spring Creek at this time.**

#### **New Source Performance Standards (NSPS)**

40 CFR Part 60, Subpart A: General Provisions. This subpart applies to the owner or operator of any stationary source that contains an affected facility, the construction or modification of which is commenced after the date of publication of any standard in Part 60. The general provisions under Subpart A apply to sources that are subject to the specific subparts of Part 60.

The Spring Creek Compressor Station is subject to 40 CFR Part 60, Subpart JJJJ. **Therefore, the General Provisions of Part 60 apply.**

40 CFR Part 60, Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. This rule applies to steam generating units with a maximum design heat capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr and commenced construction, modification, or reconstruction after June 9, 1989.

According to Samson's application, there are no steam generating units with a maximum design heat input capacity between 10 and 100 MMBtu/hr at the Spring Creek Compressor Station. **Therefore, Subpart Dc does not apply.**

40 CFR Part 60, Subpart K: Standards of performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978. This rule applies to storage vessels for petroleum liquids with a storage capacity greater than 40,000 gallons. 40 CFR Part 60, Subpart K does not apply to storage vessels for petroleum or condensate stored, processed, and/or treated at a drilling and production facility prior to custody transfer.

According to Samson, the Spring Creek Compressor Station has no storage vessels that were constructed prior to May 19, 1978. **Therefore, Subpart K does not apply.**

40 CFR Part 60, Subpart Ka: Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to June 23, 1984. This rule applies to storage vessels for petroleum liquids with a storage capacity greater

than 40,000 gallons. Subpart Ka does not apply to petroleum storage vessels with a capacity of less than 420,000 gallons used for petroleum or condensate stored, processed, or treated prior to custody transfer.

According to Samson, the Spring Creek Compressor Station has no storage vessels that were constructed between May 18, 1978 and June 23, 1984. **Therefore, Subpart Ka does not apply.**

40 CFR Part 60, Subpart Kb: Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced After July 23, 1984. This rule applies to storage vessels with a capacity greater than or equal to 75 cubic meters (~629 bbl).

According to Samson, all tanks constructed after June 23, 1984 at the Spring Creek Compressor Station which contain Volatile Organic Liquid either have capacities less than the applicability threshold or have vapor pressures below the applicability threshold. **Therefore, Subpart Kb does not apply to this facility.**

40 CFR Part 60, Subpart KKK: Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for which construction, reconstruction, or modification commenced after January 20, 1984, and on or before August 23, 2011. This rule applies to compressors and other equipment at onshore natural gas processing facilities. As defined in this subpart, a natural gas processing plant is any processing site engaged in the extraction of natural gas liquids (NGLs) from field gas, fractionation of mixed NGLs to natural gas products, or both. NGLs are defined as the hydrocarbons, such as ethane, propane, butane, and pentane that are extracted from field gas.

According to Samson, the Spring Creek Compressor Station does not extract natural gas liquids from field gas, and thus does not meet the definition of a natural gas processing plant under this subpart. **Therefore, Subpart KKK does not apply.**

40 CFR Part 60, Subpart LLL: Standards of Performance for SO<sub>2</sub> emissions from Onshore Natural Gas Processing for which construction, reconstruction, or modification commenced after January 20, 1984, and on or before August 23, 2011. This rule applies to sweetening units and sulfur recovery units at onshore natural gas processing facilities. As defined in this subpart, sweetening units are process devices that separate hydrogen sulfide (H<sub>2</sub>S) and carbon dioxide (CO<sub>2</sub>) from a sour natural gas stream. Sulfur recovery units are defined as process devices that recover sulfur from the acid gas (consisting of H<sub>2</sub>S and CO<sub>2</sub>) removed by a sweetening unit.

According to Samson, the Spring Creek Compressor Station does not process natural gas to remove sulfur compounds. **Therefore, Subpart LLL does not apply.**

40 CFR Part 60, Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines. This subpart establishes emission standards and compliance requirements for the control of emissions from stationary spark ignition (SI) internal combustion engines (ICE) that commenced construction, modification or reconstruction after June 12, 2006, where the SI ICE are

manufactured on or after specified manufacture trigger dates. The manufacture trigger dates are based on the engine type, fuel used, and maximum engine horsepower.

For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator (See 40 CFR 60.4230(a)).

Samson provided the following information:

**Table 3 - NSPS Subpart JJJJ Applicability Determination  
Samson Resources Company, Spring Creek Compressor Station**

Unit	Serial No	Unit Description	Fuel	Nameplate-Rated Horsepower	Commence Construction, Modification, or Reconstruction Date	Subpart JJJJ Trigger Date for Applicability-Manufactured on or after	Subject to Subpart JJJJ?
E1	WPW1905	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	12/19/2007	01/01/2008	No
E2	WPW1778	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	10/30/2007	01/01/2008	No
E3	WPW02104	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	03/11/2008	01/01/2008	Yes
E4	WPW00797	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	03/09/2007	01/01/2008	No
E5	WPW00938	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	05/16/2007	01/01/2008	No
E6	WPW00174	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	05/19/2006	01/01/2008	No
E7	WPW00177	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	05/22/2006	01/01/2008	No
E8	WPW00178	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	05/22/2006	01/01/2008	No
E9	WPW00724	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,340	02/05/2007	01/01/2008	No

According to Samson, Subpart JJJJ potentially applies to the Spring Creek Compressor Station because the facility has six (6) compressor engines (emission units E1, E2, **E3**, E4, E5, and E9) which commenced construction after June 12, 2006. However, emission units E1, E2, E4, E5, and E9 are four-stroke lean-burn SI-ICE with a nameplate rated hp greater than 500 but less than 1,350, manufactured prior to the specified January 1, 2008 trigger date for this engine category, and are therefore have no applicable requirements under the subpart. Spring Creek also has three compressor engines (emission units E6, E7, and E8) which commenced construction prior to the June 12, 2006 commence construction, reconstruction, or modification trigger date of Subpart JJJJ, and are therefore not subject the subpart. **Therefore, the requirements of Subpart JJJJ do not apply to emission units E1, E2, E4, E5, E6, E7, E8, or E9.**

Unit E3 is a four-stroke lean-burn SI-ICE with a nameplate rated hp greater than 500 hp but less than 1,350, manufactured after the January 1, 2008 trigger date specified for this engine category. **Therefore, the requirements of Subpart JJJJ apply to unit E3, including the emission standards for engines of this category manufactured after January 1, 2008 but prior to July 1, 2010.**

Should Samson propose to install any replacement engine that is subject to Subpart JJJJ for unit(s) E1, E2, E4, E5, E6, E7, E8, or E9, Samson will not be allowed to use the off permit changes provision, and will be required to submit a minor permit revision application to incorporate Subpart JJJJ requirements into the permit.

40 CFR Part 60, Subpart OOOO: Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution. This subpart establishes emission standards and compliance schedules for the control of VOC and SO<sub>2</sub> emissions from affected facilities that commence construction, modification or reconstruction after August 23, 2011. Affected facilities under this subpart include gas wells, compressors, pneumatic controllers, storage vessels, process unit equipment, and sweetening units. The effective date for this subpart is October 15, 2012.

According to information provided by Samson, all of the affected facilities at the Spring Creek Compressor Station commenced construction prior to August 23, 2011 and have not been reconstructed or modified since this time. **Therefore, Subpart OOOO does not apply.**

### **National Emission Standards for Hazardous Air Pollutants (NESHAP)**

40 CFR Part 63, Subpart A: General Provisions. This subpart contains national emissions standards for HAPs that regulate specific categories of sources that emit one or more HAP regulated pollutants under the CAA. The general provisions under subpart A apply to sources that are subject to the specific subparts of Part 63.

As explained below, the Spring Creek Compressor Station is subject to 40 CFR 63 Subparts HH and ZZZZ. **Therefore the General Provisions of Part 63 apply as specified in the relevant subparts.**

40 CFR Part 63, Subpart HH: National Emission Standards for Hazardous Air Pollutants from Oil and Natural Gas Production Facilities. This subpart applies to the owners and operators of affected units located at natural gas production facilities that are area or major sources of HAPs, and that process, upgrade, or store natural gas prior to the point of custody transfer, or that process, upgrade, or store natural gas prior to the point at which natural gas enters the natural gas transmission and storage source category or is delivered to a final end user. The affected units are glycol dehydration units, storage vessels, and the group of ancillary equipment, and compressors intended to operate in volatile hazardous air pollutant service, which are located at natural gas processing plants.

### *Throughput Exemption*

Those sources whose maximum natural gas throughput, as appropriately calculated per §63.760(a)(1)(i) through (a)(1)(iii), is less than 18,400 standard cubic meters per day are exempt from the requirements of this subpart.

### *Source Aggregation*

Major source, as used in this subpart, has the same meaning as in §63.2, except that:

- 1) Emissions from any oil and gas production well with its associated equipment and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units.
- 2) Emissions from processes, operations, or equipment that are not part of the same facility shall not be aggregated.
- 3) For facilities that are production field facilities, only HAP emissions from glycol dehydration units and storage vessels shall be aggregated for a major source determination.

### *Facility*

For the purpose of a major source determination, facility means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in Subpart HH. Examples of facilities in the oil and natural gas production category include, but are not limited to: well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

### *Production Field Facility*

Production field facilities are those located prior to the point of custody transfer. The definition of custody transfer (40 CFR 63.761) means the point of transfer after the processing/treating in the producing operation, except for the case of a natural gas processing plant, in which case the point of custody transfer is the inlet to the plant.

### *Natural Gas Processing Plant*

A natural gas processing plant is defined in 40 CFR 63.761 as any processing site engaged in the extraction of NGLs from field gas, or the fractionation of mixed NGLs to natural gas products, or a combination of both. A treating plant or gas plant that does not engage in these activities is considered to be a production field facility.

### *Major Source Determination for Production Field Facilities*

The definition of major source in subpart HH (at 40 CFR 63.761) states, in part, that only emissions from the dehydration units and storage vessels at production field facilities shall be aggregated when comparing to the major source thresholds.

For facilities that are not production field facilities, HAP emissions from all HAP emission units shall be aggregated.

### *Major Source Glycol Dehydrator Applicabilities*

For facilities that are determined to be major HAP sources, each glycol dehydration unit is subject to the glycol dehydration unit process vent standards of 40 CFR 63.765 for small or large dehydration units, defined, as follows, in 40 CFR 63.760:

**Small Glycol Dehydration Unit:** a glycol dehydration unit, located at a major source of HAP, with an actual annual average natural gas flowrate less than 85 thousand standard cubic meters per day or actual annual average benzene emissions less than 0.90 Mg/yr, determined according to §63.772(b).

**Large Glycol Dehydration Unit:** a glycol dehydration unit, located at a major source of HAP, with an actual annual average natural gas flowrate equal to or greater than 85 thousand standard cubic meters per day and actual annual average benzene emissions equal to or greater than 0.90 Mg/yr, determined according to §63.772(b). A glycol dehydration unit complying with the 0.9 Mg/yr control option under §63.765(b)(1)(ii) is considered to be a large dehydrator.

### *Area Source Applicability*

40 CFR Part 63, Subpart HH also applies to area sources of HAPs. An area source is a HAP source whose total HAP emissions are less than 10 tpy of any single HAP or 25 tpy for all HAPs in aggregate. This subpart requires different emission reduction requirements for glycol dehydration units found at oil and gas production facilities based on their geographical location.

Units located in densely populated areas (determined by the Bureau of Census) and known as urbanized areas with an added 2-mile offset and urban clusters of 10,000 people or more, are required to have emission controls. Units located outside these areas will be required to have the glycol recirculation pump rate optimized or operators must document that uncontrolled annual actual benzene emissions are less than 0.9 megagrams (1,984 lbs.).

Any source that determines that it is not a major source but has actual emissions of 5 tons per year of a single HAP or 12.5 tons per year of a combination of HAP (i.e. 50 percent of the major source thresholds), shall update its major source determination within 1 year of the prior determination and each year thereafter, using gas composition data measured during the preceding 12 months.

### *Applicability of Subpart HH to the South Ignacio Central Delivery Point*

According to Samson, the Spring Creek Compressor Station has affected sources under this subpart (emission unit D1 (a TEG dehydration unit)), upgrades natural gas, and is located prior to the point of custody transfer (and therefore prior to the point at which natural gas leaves the natural gas production category and enters the natural gas transmission and storage category). Therefore facility is in the natural gas production category and only emissions from dehydration units and storage vessels need to be aggregated when determining major source status.

Samson determined using GRI-GLYCalc 4.0, that the potential emissions from TEG dehydration unit D-1 are less than major source thresholds for combined and individual HAPs. Aggregated emissions from the TEG dehydration unit and tanks are also below the major source thresholds for combined and individual HAPs. **Therefore the Spring Creek Compressor Station is subject to the area source requirements of Subpart HH.**

According to Samson the Spring Creek Compressor Station is not located in an urbanized area or urban cluster, and Samson is therefore only required to optimize the glycol pump recirculation ratio or document that uncontrolled actual annual average benzene emissions are less than 0.9 megagrams. Samson determined using GRI-GLYCalc 4.0, that uncontrolled actual annual average benzene emissions from the TEG dehydration unit were greater than 0.9 megagrams. **Therefore, Samson is subject to the requirement to optimize the glycol pump recirculation rate, per 40 CFR 63.764(d)(2) of the Subpart HH General Standards.**

If Samson determines that actual emissions are 5 tons per year of a single HAP or 12.5 tons per year of a combination of HAP (i.e. 50 percent of the major source thresholds), they shall update their major source determination within 1 year of the prior determination and each year thereafter, using gas composition data measured during the preceding 12 months.

40 CFR Part 63, Subpart HHH: National Emission Standards for Hazardous Air Pollutants from Natural Gas Transmission and Storage Facilities. This subpart applies to natural gas transmission and storage facilities that transport or store natural gas prior to entering the pipeline to a local distribution company or to a final end user, and that are a major source of hazardous air pollutant (HAP) emissions. Natural gas transmission means the pipelines are used for long distance transport (excluding processing).

According to Samson, the Spring Creek Compressor Station is not part of the natural gas transmission and storage source category. **Therefore, Subpart HHH does not apply.**

40 CFR Part 63, Subpart ZZZZ (RICE MACT): National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This rule establishes national emission limitations and operating limitations for HAPs emitted from stationary spark ignition internal combustion engines (SI ICE) and stationary compression ignition internal combustion engines (CI ICE) at major and area sources of HAPs.

For the purposes of this standard, construction or reconstruction is as defined in §63.2.

*Summary of Applicability to Engines at Major HAP Sources*

Major HAP Sources			
Engine Type	Horse Power Rating	New / Existing	Applicability Trigger Date
SI ICE – All <sup>1</sup>	≥ 500 HP	New	On or After: 12/19/2002
SI ICE – 4SRB	> 500 HP	Existing	Before: 12/19/2002
SI ICE – All <sup>1</sup>	≤ 500 HP	New	On or After: 6/12/2006
SI ICE – All <sup>1</sup>	≤ 500 HP	Existing	Before: 6/12/2006
CI ICE – All <sup>2</sup>	≥ 500 HP	New	On or After: 12/19/2002
CI ICE – Non Emergency	> 500 HP	Existing	Before: 12/19/2002
CI ICE – All <sup>2</sup>	≤ 500 HP	New	On or After: 6/12/2006
CI ICE – All <sup>2</sup>	≤ 500 HP	Existing	Before: 6/12/2006

1. All includes emergency ICE, limited use ICE, ICE that burn land fill or digester gas, 4SLB, 2SLB, and 4SRB.
2. All includes emergency ICE and limited use ICE

**Applicability of 40 CFR 63, Subpart ZZZZ to the Spring Creek Compressor Station:**

Unit	Serial Number	Unit Description	Fuel	Site Rated HP	Commenced Construction or Reconstruction Date	Subject to Subpart ZZZZ?
E1	WPW190	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	12/19/2007	Yes
E2	WPW1778	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	10/30/2007	Yes
E3	WPW02104	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	03/11/2008	Yes
E4	WPW00797	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	03/09/2007	Yes
E5	WPW00938	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	05/16/2007	Yes
E6	WPW00174	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	05/19/2006	Yes
E7	WPW00177	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	05/22/2006	Yes
E8	WPW00178	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	05/22/2006	Yes
E9	WPW00724	Caterpillar G3516LE 4SLB Compressor Engine	Natural Gas	1,092	02/05/2007	Yes

According to Samson, Spring Creek is a major source as defined in §63.6675 of Subpart ZZZZ. Units E1 through E9 are four-stroke lean-burn (4SLB) stationary RICE > 500 site-rated hp that commenced constructed after December 19, 2002. As a result of this construction date, the units are considered new 4SLB stationary RICE. **Therefore, Units E1, E2, E3, E4, E5, E6, E7, E8, and E9 are subject to the requirements for new or reconstructed non-emergency 4SLB SI RICE >500 hp located at a major source of HAPs.**

Specifically, these units are subject to the requirements of Subpart ZZZZ as outlined in the table below:

**Applicable Requirements of 40 CFR 63, Subpart ZZZZ for New 4SLB SI RICE >500 at a Major Source of HAPS:**

Subpart ZZZZ Requirement	Subpart ZZZZ Table	Table Item Number	Corresponding Subpart ZZZZ Citations
Emission Limits	Table 2a	Item number 2	§§63.6600, and §63.6640
Operational Requirements	Table 2b	Item number 1	§63.6600, §63.6630, and §63.6640
Subsequent Performance Test Requirements	Table 3	Item number 1 or 3	§63.6615, and §63.6620
Performance Test Requirements	Table 4	Item number 3	§63.6610, §63.6620, and §63.6640
Initial Compliance Requirements	Table 5	Item number 1, 5, or 9	§63.6625, and §63.6630
Continuous Compliance	Table 6	Item number 1, 3, or 7	§63.6640
Reporting Requirements	Table 7	Item number 1	§63.6650
General Provisions	Table 8	As specified in Table 8	§63.6665

40 CFR Part 63, Subpart DDDDD (Boiler MACT (for major sources)): National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. This rule establishes national emission limitations and operating limitations for HAPs emitted from new and existing industrial boilers, institutional boilers, commercial boilers, and process heaters that are located at major sources of HAPs. Boilers or process heaters that combust natural gas for fuel or have a maximum designed heat input capacity less than 10 MMBtu/hr are subject to work practice standards in lieu of emission limits. For the purposes of this subpart, an affected unit is an existing unit if it was constructed prior to June 4, 2010.

The Spring Creek Compressor Station is not a major source as defined in §63.7575. **Therefore, Subpart DDDDD does not apply.**

### **Compliance Assurance Monitoring (CAM) Rule**

40 CFR Part 64: Compliance Assurance Monitoring Provisions. According to 40 CFR 64.2(a), the CAM rule applies to each Pollutant Specific Emission Unit (PSEU) at a major source that is required to obtain a Part 70 or Part 71 permit if the unit satisfies all of the following criteria:

- 1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant other than an emissions limitation or standard that is exempt under §64.2(b)(1);

*“§64.2(b)(1): Exempt emission limitations or standards. The requirements of this part shall not apply to any of the following emission limitations or standards:*

- (i) *Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Act;*
- (ii) *Stratospheric ozone protection requirements under Title VI of the Act;*
- (iii) *Acid Rain Program requirements pursuant to Sections 404, 405, 406, 407(a), 407(b) or 410 of the Act;*

- (iv) *Emissions limitations or standards or other applicable requirements that apply solely under an emissions trading program approved or promulgated by the Administrator under the Act that allows for trading emissions with a source or between sources;*
- (v) *An emissions cap that meets the requirements specified in §70.4(b)(12) or §71.6(a)(13)(iii) of this chapter;*
- (vi) *Emission limitations or standards for which a Part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1.”*

“§64.1: Continuous compliance method means a method, specified by the applicable standard or an applicable permit condition, which:

- (1) *Is used to determine compliance with an emission limitation or standard on a continuous basis, consistent with the averaging period established for the emission limitation or standard; and*
  - (2) *Provides data either in units of the standard or correlated directly with the compliance limit.”*
- 2) The unit uses a control device to achieve compliance with any such limit or standard; and
  - 3) The unit has pre-control device emissions of the applicable regulated pollutant that are equal to or greater than 100% of the amount, in tons per year, required for a source to be classified as a major source.

According to information provided by Samson, the CAM rule does not apply to any of the units at the Spring Creek Compressor Station as the pre-controlled emissions for each unit are less than the major source threshold. **Therefore, CAM does not apply.**

## **Chemical Accident Prevention Program**

40 CFR Part 68: Chemical Accident Prevention Provisions. This rule applies to stationary sources that manufacture, process, use, store, or otherwise handle more than the threshold quantity of a regulated substance in a process. Regulated substances include 77 toxic and 63 flammable substances which are potentially present in the natural gas stream entering the facility and in the storage vessels located at the facility. The quantity of a regulated substance in a process is determined according to the procedures presented under §68.115. §68.115(b)(1) and (2)(i) indicate that toxic and flammable substances in a mixture do not need to be considered when determining whether more than a threshold quantity is present at a stationary source if the concentration of the substance is below one percent by weight of the mixture. §68.115(b)(2)(iii) indicates that prior to entry into a natural gas processing plant, regulated substances in naturally occurring hydrocarbon mixtures need not be considered when determining whether more than a threshold quantity is present at a stationary source. Naturally occurring hydrocarbon mixtures include condensate, field gas, and produced water.

According to Samson, the Spring Creek Compressor Station does not have regulated substances above the threshold quantities in this rule. **Therefore the facility is not subject to the requirement to develop and submit a risk management plan.**

## **Stratospheric Ozone and Climate Protection**

40 CFR Part 82, Subpart F: Air Conditioning Units. According to information provided by Samson, no maintenance, service, repair or disposal of any equipment containing Class I or Class II refrigerants chlorofluorocarbons (CFCs)) occurs at Spring Creek Compressor Station. However, if Samson were to engage in any of the afore mentioned activities it must comply with the standards of part 82, Subpart F for recycling and emissions reduction if they service, maintain, or repair the air conditioning units in any way or if they dispose of the units.

40 CFR Part 82, Subpart H: Halon Fire Extinguishers. According to information provided by Samson, there are no halon fire extinguishers at Spring Creek Compressor Station. However, should Samson obtain any halon fire extinguishers, then it must comply with the standards of 40 CFR Part 82, Subpart H for halon emissions reduction, if it services, maintains, tests, repairs, or disposes of equipment that contains halon or uses such equipment during technician training. Specifically, Samson would be required to comply with 40 CFR Part 82 and submit an application for a modification to this Title V permit.

## **Mandatory Greenhouse Gas Reporting**

40 CFR Part 98: Mandatory Greenhouse Gas Reporting. This rule requires sources above certain emission thresholds to calculate, monitor, and report greenhouse gas emissions. The requirements of 40 CFR Part 98 and CAA §307(d)(1)(V), the CAA authority under which 40 CFR Part 98 was promulgated, however, need not be included in a tribal-issued part 70 permit because those requirements are not included in the definition of “applicable requirement” in either 40 CFR part 70 or RAC 1-103(11). Although the rule is not an applicable requirement under 40 CFR Part 70 or the RAC, the source is not relieved from the requirement to comply with the rule separately from compliance with its Part 70 operating permit. It is the responsibility of each source to determine whether Part 98 is applicable and to comply, if necessary.

## **4. Public Participation**

### **a. Public Notice**

Per RAC § 2-109, all Part 70 draft operating permits shall be publicly noticed and made available for public comment.

Public notice is given by publication in a newspaper of general circulation in the area where the source is located or in a state publication designed to give general public notice, to persons on a mailing list developed by the Tribe, including those who request in writing to be on the list, and by other means if

necessary to assure adequate notice to the affected public. If an interested person would like to be added to the Tribe's mailing list to be informed of future actions on permits issued by the Tribe, please send your name and address:

by United State Postal Service to:

Part 70 Permitting Contact  
Southern Ute Indian Tribe  
Environmental Programs Division  
Part 70 Program  
PO Box 737 MS #84  
Ignacio, Colorado 81137

by any other delivery service to:

Part 70 Permitting Contact  
Southern Ute Indian Tribe  
Environmental Programs Division  
Part 70 Program  
398 Ouray Drive  
Ignacio, Colorado 81137

Public notice will be published in the Durango Herald, in order to provide opportunity for public comment on the draft permit and the opportunity to request a public hearing.

b. Opportunity for Comment

Members of the public will be given an opportunity to review a copy of the draft permit prepared by the Tribe, the application, this statement of basis for the draft permit, and all supporting materials for the draft permit. Copies of these documents are available at:

Southern Ute Indian Tribe  
Environmental Programs Division  
Air Quality Program  
71 Mike Frost Way  
Ignacio, Colorado 81137

All documents are available for review at the Southern Ute Indian Tribe's Environmental Programs Division office Monday through Friday from 9:00 a.m. to 4:00 p.m. (excluding holidays).

Any interested person may submit written comments on the draft Part 70 operating permit during the public comment period at the address specified in the public notice. The Tribe will consider and address comments in making a final decision on the permit. The Tribe keeps a record of the commenters and of the issues raised during the public participation process.

Anyone, including the applicant, who believes any condition of the draft permit is inappropriate should raise all reasonably ascertainable issues and submit all arguments supporting his or her position by the close of the public comment period. Any supporting materials submitted must be included in full and may not be incorporated by reference, unless the material has already been submitted as part of the administrative record in the same proceeding or consists of Environmental Commission, tribal, state or Federal statutes and regulations, EPA documents of general applicability, or other generally available reference material.

c. Opportunity to Request a Hearing

A person may submit a written request for a public hearing to the Part 70 Permit Contact, at the address listed above, by stating the nature of the issues to be raised at the public hearing. Based on the number of hearing requests received, the Tribe will hold a public hearing whenever it finds there is a significant degree of public interest in a draft operating permit. The Tribe will provide public notice of the public hearing. If a public hearing is held, any person may submit oral or written statements and data concerning the draft permit.

d. Public Petitions to the Administrator

In the event the Administrator of the United States Environmental Protection Agency does not object to issuance of the permit, on the basis that it would not be in compliance with applicable requirements, within its 45-day review period, any person may then petition the Administrator within 60 days after the expiration of the Administrator's 45-day review period to make such objection. Any such petition must be based only on objections to the permit that were raised with reasonable specificity during the public comment period unless the petitioner demonstrates that it was impracticable to raise such objections within such period, or unless the grounds for such objections arose after such period. If the administrator objects to a permit as a result of this petition, the Tribe shall not issue the permit until the Administrator's objection has been resolved, except that a petition for review does not stay the effectiveness of a permit or its requirements if the permit was issued after the end of the 45-day review period and before the Administrator's objection.

e. Appeal of Permits

Within 60 days after the Tribe's final permit action, an applicant, any person who filed comments on the draft permit or participated in the public hearing, and any other person who could obtain judicial review of that action under applicable law, may appeal to the Environmental Commission in accordance with RAC 2-109(8) and the Commission's Procedural Rules.

Petitions for administrative review of final permit actions can be filed after the deadline designated by the Commission only if they are based solely on grounds arising after the deadline for administrative review has passed. Such petitions shall be filed no later than 60 days after the new grounds for review arise. If the final permit action being challenged is the Tribe's failure to take final action, a petition for administrative review may be filed any time before the Tribe denies or issues the final permit.

f. Notice to Affected States/Tribes

As described in RAC § 2-109(3), public notice will be given by notifying all affected programs. The following entities will be notified:

- State of Colorado, Department of Public Health and Environment

- State of New Mexico, Environment Department
- Ute Mountain Ute Tribe, Environmental Programs Department
- Navajo Tribe, Navajo Nation EPA
- Jicarilla Tribe, Environmental Protection Office
- National Park Service, Air Resources Division, Denver, CO
- U.S. Department of Agriculture, United States Forest Service, Rocky Mountain Region

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